

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
TOKAI CARBON CB LTD

AUTHORIZING THE OPERATION OF  
Borger Carbon Black Plant  
Carbon Black Manufacturing

LOCATED AT  
Hutchinson County, Texas  
Latitude 35° 39' 50" Longitude 101° 26' 10"  
Regulated Entity Number: RN100222413

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No:     O1414     Issuance Date: \_\_\_\_\_

\_\_\_\_\_  
For the Commission

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## **General Terms and Conditions**

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

## **Special Terms and Conditions:**

### **Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
  - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
  - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

- A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
  - B. Title 30 TAC § 101.3 (relating to Circumvention)
  - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
  - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
  - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
  - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
  - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
  - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
  - I. Title 30 TAC § 101.222 (relating to Demonstrations)
  - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
    - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
    - (ii) Title 30 TAC § 111.111(a)(1)(E)
    - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
    - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
  - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
  - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as

required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
  - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
  - (2) Records of all observations shall be maintained.
  - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
  - (4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).
  - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
  - (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
  - (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
    - (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
    - (2) Records of all observations shall be maintained.
    - (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be

evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
  - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
  - (ii) Sources with an effective stack height ( $h_e$ ) less than the standard effective stack height ( $H_e$ ), must reduce the allowable emission level by multiplying it by  $[h_e/H_e]^2$  as required in 30 TAC § 111.151(b)
  - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

- 4. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

**Additional Monitoring Requirements**

- 5. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required



intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

#### **New Source Review Authorization Requirements**

6. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
  - A. Are incorporated by reference into this permit as applicable requirements
  - B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield
7. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
8. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

#### **Compliance Requirements**

9. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
10. Use of Discrete Emission Credits to comply with the applicable requirements:
  - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
    - (i) Title 30 TAC Chapter 115

- (ii) Title 30 TAC Chapter 117
  - (iii) If applicable, offsets for Title 30 TAC Chapter 116
  - (iv) Temporarily exceed state NSR permit allowables
- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
- (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
  - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
  - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
  - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
  - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

#### **Risk Management Plan**

11. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

#### **Permit Location**

12. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

#### **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**New Source Review Authorization References**

### **Applicable Requirements Summary**

<b>Unit Summary .....</b>	<b>11</b>
<b>Applicable Requirements Summary .....</b>	<b>12</b>

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
119	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
121	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
122	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-1	FLARES	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-1	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.
FLARE-2	FLARES	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-2	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.
FLARE-3	FLARES	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-3	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.
FLARE-4	FLARES	N/A	R111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FLARE-4	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
119	EP	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
121	EP	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
122	EP	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
FLARE-1	CD	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FLARE-1	CD	63A	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.11(b)(7)(i)	Method 22 in App. A of part 60 of this chapter shall be used.			
FLARE-2	CD	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FLARE-2	CD	63A	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
FLARE-3	CD	R111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FLARE-3	CD	63A	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
FLARE-4	CD	R111	Opacity	30 TAC Chapter	§ 111.111(a)(4)(A)	Visible emissions from a	§ 111.111(a)(4)(A)(i)	§ 111.111(a)(4)(A)(ii)	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				111, Visible Emissions		process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(ii)		
FLARE-4	CD	63A	112(B) HAPS	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None



**Additional Monitoring Requirements**

**Periodic Monitoring Summary ..... 16**

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 119	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R111
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: 15% Opacity	
Periodic Monitoring Text: Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Any opacity readings above the deviation limit shall be reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 121	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R111
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: 15% Opacity	
Periodic Monitoring Text: Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Any opacity readings above the deviation limit shall be reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 122	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R111
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: 15% Opacity	
Periodic Monitoring Text: Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Any opacity readings above the deviation limit shall be reported as a deviation.	

**New Source Review Authorization References**

<b>New Source Review Authorization References .....</b>	<b>20</b>
<b>New Source Review Authorization References by Emission Unit .....</b>	<b>21</b>

### New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Prevention of Significant Deterioration (PSD) Permits</b>	
PSD Permit No.: PSDTX1032M1	Issuance Date: 02/08/2019
<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 1867A	Issuance Date: 02/08/2019
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.102	Version No./Date: 09/04/2000
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.352	Version No./Date: 11/22/2012
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.478	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 7	Version No./Date: 05/05/1976
Number: 118	Version No./Date: 07/20/1992

### **New Source Review Authorization References by Emissions Unit**

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Unit/Group/Process ID No.</b>	<b>Emission Unit Name/Description</b>	<b>New Source Review Authorization</b>
119	#1 & #2 BOILERS STACK	1867A, PSDTX1032M1
121	DRYERS 1,2,3 & 4 STACK	1867A, PSDTX1032M1
122	DRYERS 1,2,4,5 & 6 STACK	1867A, PSDTX1032M1
FLARE-1	UNIT1 PRIMARY BAG FILTER FLARE	1867A, PSDTX1032M1
FLARE-2	UNIT 2 PRIMARY BAG FILTER FLARE	1867A, PSDTX1032M1
FLARE-3	UNIT 3 BAG FILTER FLARE	1867A, PSDTX1032M1
FLARE-4	UNIT 4 PRIMARY BAG FILTER FLARE	1867A, PSDTX1032M1

**Appendix A**

**Acronym List ..... 23**



## Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO <sub>2</sub>	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

**Appendix B**

**Major NSR Summary Table ..... 25**

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
1	Plant 1 No. 1 and No. 2 Dryer Purge Stack (7)	NO <sub>x</sub>	1.58	6.49	[ 2 ]	[ 17, 18 ]	[ ]
		CO	3.39	13.94			
		VOC	0.56	2.30			
		PM <sub>10</sub>	0.82	3.37			
		SO <sub>2</sub>	78.43	322.06			
		H <sub>2</sub> S	0.40	1.64			
		CS <sub>2</sub>	0.40	1.64			
		COS	0.13	0.55			
2	Plant 1 Secondary Filter Stack	PM	1.18	4.86	[ 2, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
3	Plant 1 No. 3 and No. 4 Dryer Purge Stack (7)	NO <sub>x</sub>	1.58	6.49	[ 2 ]	[ 17, 18 ]	[ ]
		CO	3.39	13.94			
		VOC	0.56	2.30			
		PM <sub>10</sub>	0.87	3.56			
		SO <sub>2</sub>	78.43	322.06			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		H <sub>2</sub> S	0.40	1.64			
		CS <sub>2</sub>	0.40	1.64			
		COS	0.13	0.55			
103	Plant 1 Pulse Filter No. 1 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
104	Plant 1 Pulse Filter No. 2 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
106	Plant 1 Pulse Filter No. 3 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
105	Plant 1 Pulse Filter No. 4 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
107	Plant 1 Pulse Filter No. 5 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
74	Plant 2 No. 1, No. 2 and No. 3 Dryer Purge Stack (7)	NO <sub>x</sub>	1.73	7.11	[ 2 ]	[ 17, 18 ]	[ ]
		CO	3.72	15.27			
		VOC	0.56	2.30			
		PM <sub>10</sub>	0.88	3.58			
		SO <sub>2</sub>	78.43	322.06			
		H <sub>2</sub> S	0.40	1.64			
		CS <sub>2</sub>	0.40	1.64			
		COS	0.13	0.55			
76	Plant 2 Secondary Filter Stack	PM	1.37	5.61	[ 2, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
78	Plant 2 No. 4, No. 5 and No. 6 Dryer Purge Stack (7)	NO <sub>x</sub>	1.73	7.11	[ 2 ]	[ 17, 18 ]	[ ]
		CO	3.72	15.27			
		VOC	0.56	2.30			
		PM <sub>10</sub>	0.98	4.02			
		SO <sub>2</sub>	78.43	322.06			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		H <sub>2</sub> S	0.40	1.64			
		CS <sub>2</sub>	0.40	1.64			
		COS	0.13	0.55			
108	Plant 2 Pulse Filter No. 1 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
109	Plant 2 Pulse Filter No. 2 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
110	Plant 2 Pulse Filter No. 3 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
111	Plant 2 Pulse Filter No. 4 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]
112	Plant 2 Pulse Filter No. 5 Vent	PM	0.14	0.59	[2, 27 ]	[17, 18, 29, 30, 31, 32]	[ ]

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
119	Boiler Stacks Boiler 1 and 2 Common Stack (4)	NO <sub>x</sub>	222.44	-	2, 5, 13,	2, 13, 17,18	13, 14,19
		CO	477.57	-			
		VOC	21.03	-			
		PM	59.03				
		PM <sub>10</sub>	41.79	-			
		PM <sub>2.5</sub>	41.79	-			
121	Plant 1 Dryer Stack (7)	NO <sub>x</sub>	46.60	-	2, 13,	2, 13, 17,18	13, 14
		CO	322.03	-			
		VOC	4.64	-			
		PM	38.64				
		PM <sub>10</sub>	26.86	-			
		PM <sub>2.5</sub>	26.86	-			
122	Plant 2 Dryer Stack (7)	NO <sub>x</sub>	84.84	-	2, 13,	2, 13, 17,18	13, 14
		CO	322.03	-			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	8.44	-			
		PM	44.80				
		PM <sub>10</sub>	31.14	-			
		PM <sub>2.5</sub>	31.14	-			
119, 121, 122 Flare-1, Flare-2, Flare-3, and Flare-4	Cap for Boiler Stacks, Flares, and Dryer Stacks (4,6)	NO <sub>x</sub>	-	1226.30	2, 5, 13, ]	2, 13, 17,18 ]	13, 14, 19 ]
		CO	-	2632.76			
		VOC	-	132.35			
		PM	-	624.00			
		PM <sub>10</sub>	-	437.09			
		PM <sub>2.5</sub>	-	437.09			



**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
119, 121, 122 Flare-1, Flare-2, Flare-3, and Flare-4	Cap for Boiler Stacks, Flares, and Dryer for Combined Sulfur (4,5,7)	SO <sub>2</sub>	3607.88	14,814.84	[ 2, 16 ]	[ 2, 16, 17, 18, 31 ]	[ ]
		H <sub>2</sub> S	18.42	75.62			
		CS <sub>2</sub>	18.42	75.62			
		COS	6.14	25.21			
C-1	Emergency Generator Engine 1	NO <sub>x</sub>	5.57	2.44	[ 2, 24 ]	[ 17, 18, 24, 29, 30, 32 ]	[ ]
		CO	3.87	1.70			
		VOC	0.07	0.03			
15	No. 4 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40	[ 2 ]	[ 17, 18 ]	[ ]
		CO	0.08	0.40			
		VOC	0.01	0.03			
		PM <sub>10</sub>	0.01	0.03			
		SO <sub>2</sub>	0.01	0.01			
19	No. 5 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40	[ 2 ]	[ 17, 18 ]	[ ]
		CO	0.08	0.40			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	0.01	0.03			
		PM <sub>10</sub>	0.01	0.03			
21	No. 1 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40	[ 2 ]	[ 17, 18 ]	[ ]
		CO	0.08	0.40			
		VOC	0.01	0.03			
		PM <sub>10</sub>	0.01	0.03			
		SO <sub>2</sub>	0.01	0.01			
31	Carbon Black Oil Tank 1	VOC	0.01	0.02	[ 2, 25, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
32	Carbon Black Oil Tank 2	VOC	0.01	0.02	[ 2, 25, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
33	Carbon Black Oil Tank 3	VOC	0.01	0.02	[ 2, 25, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
34	Carbon Black Oil Tank 4	VOC	0.01	0.02	[ 2, 25, 27 ]	[ 17, 18, 29, 30, 31, 32 ]	[ ]
CBO SAMPLE	Feedstock (carbon black oil) Sampling	VOC	0.01	0.01	[ 2, 16 ]	[ 16, 17, 18, 31 ]	[ ]

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
BLACK SAMPLE	In-situ Carbon Black Sampling	PM	0.02	0.02	[ 16 ]	[ 16, 17, 18, 31 ]	[ ]
		PM <sub>10</sub>	0.01	0.01			
Maintenance, Startup, and Shutdown (MSS) Emissions [ ]							
Flare-1	Plant 1 Unit 1 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	11.55	-	[ 27 ]	[ 17,18, 20, 21, 22, 23, 29, 30, 31, 32 ]	[ 19 ]
		CO	156.98	-			
		VOC	12.11	-			
		PM <sub>10</sub>	15.47	-			
Flare-2	Plant 1 Unit 2 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	13.86	-	[ 27 ]	[ 17,18, 20, 21, 22, 23, 29, 30, 31, 32 ]	[ 19 ]
		CO	188.38	-			
		VOC	14.53	-			
		PM	18.56	-			
Flare-3	Plant 2 Unit 3 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	15.71	-	[ 27 ]	[ 17,18, 20, 21, 22, 23, 29, 30, 31, 32 ]	[ 19 ]
		CO	213.49	-			
		VOC	16.47	-			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM	21.04	-			
Flare-4	Plant 2 Unit 4 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	13.86	-	27	17, 18, 20, 21, 22, 23, 29, 30, 31, 32	19
		CO	188.38	-			
		VOC	14.53	-			
		PM	18.56	-			
		PM <sub>10</sub>	18.56	-			
		PM <sub>2.5</sub>	18.56	-			
RVS	Cap for the 12 Small Reactor Vents	NO <sub>x</sub>	4.20	3.29	28	17, 18, 23, 29, 30, 32	19
		CO	3.53	2.77			
		VOC	0.23	0.20			
		PM <sub>10</sub>	0.32	0.25			
		PM <sub>2.5</sub>	0.32	0.25			
		SO <sub>2</sub>	0.03	0.02			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
RVL	Cap for the 3 Large Reactor Vents	NO <sub>x</sub>	2.50	4.04	28	17, 18, 23, 29, 30, 32	19
		CO	2.10	3.40			
		VOC	0.14	0.23			
		PM <sub>10</sub>	0.19	0.31			
		PM <sub>2.5</sub>	0.19	0.31			
		SO <sub>2</sub>	0.02	0.03			
119	Boiler Stacks Boiler 1 and 2 Common Stack MSS (4)	NO <sub>x</sub>	6.50	0.67	2	2, 17, 18, 20, 21, 22, 23, 30, 32	19
		CO	5.46	0.56			
		VOC	0.36	0.04			
		PM <sub>10</sub>	0.50	0.05			
		PM <sub>2.5</sub>	0.50	0.05			
		SO <sub>2</sub>	0.04	0.01			

**Major NSR Summary Table**

Permit Numbers 1867A and PSDTX1032					Issuance Date: February 8, 2019		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (8)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
121 and 122	Cap for Plants 1 and 2 Dryer Stacks MSS (7)	NO <sub>x</sub>	3.50	1.02	2	2, 17, 18, 20, 21, 22, 23, 30, 32	19
		CO	3.00	0.86			
		VOC	0.20	0.06			
		PM <sub>10</sub>	0.30	0.08			
		PM <sub>2.5</sub>	0.30	0.08			
		SO <sub>2</sub>	0.10	0.01			
MSS Fugitive Emissions							
CanMSS	Solvent and Aerosol Can Usage	VOC	6.40	1.40		17, 18, 23, 30, 32	19
ORIFICE	Orifice Changeout	VOC	0.01	0.02	26, 27	17, 18, 23, 29, 30, 31, 32	19
REFRACTORY	Recasting Furnace Refractory	PM	0.03	0.01	27	17, 18, 23, 29, 30, 31, 32	19
		PM <sub>10</sub>	0.02	0.01			

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
 (2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
 (3) NO<sub>x</sub> - total oxides of nitrogen  
       CO - carbon monoxide  
       VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

PM	- total particulate matter, suspended in the atmosphere, including PM <sub>10</sub> and PM <sub>2.5</sub> , as represented
PM <sub>10</sub>	- total particulate matter equal to or less than 10 microns in diameter, including PM <sub>2.5</sub> , as represented
PM <sub>2.5</sub>	- particulate matter equal to or less than 2.5 microns in diameter
SO <sub>2</sub>	- sulfur dioxide
H <sub>2</sub> S	- hydrogen sulfide
CS <sub>2</sub>	- carbon disulfide
COS	- carbonyl sulfide

- (4) Annual emissions from the boiler and dryer stacks and each flare must also comply with the annual cap of emissions for these sources. Annual emission caps were based upon a maximum production rate of carbon black not to exceed 391.7 million pounds per year.
- (5) These emissions are the reduced sulfur compounds associated with combustion of the tail-gas. The combined reduced sulfur compounds from EPNs 119, 121, 122, Flare-1, Flare-2, Flare-3, and Flare-4 shall not exceed these rates. As previously authorized, the Dryers (EPNs 121 and 122) may burn up to 40 percent of the tail gas that flows to EPN 119 in addition to the natural gas-based emissions. The routed tail-gas may be burned in either Plant 1 or Plant 2 or both. **(1/06)**
- (6) The flares are authorized only as backup control devices to the boilers during planned shutdown, maintenance, and startup of the steam turbine, boilers and tail-gas fans as authorized by the special conditions. Emission rates are based on and the facilities are limited by 840 hours per year at each flare. **(8/10)**
- (7) Emission values for Dryer Purge Stacks (EPNs 1, 3, 74, and 78) have been altered to reflect increases in emissions that correspond with decreases in emissions in EPNs 121, 122, and 119/121/122 Flares due to rerouting of hot exhaust gases. **(1/08)**
- (8) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.



## Texas Commission on Environmental Quality Air Quality Permit

*A Permit Is Hereby Issued To*  
**Tokai Carbon CB Ltd.**  
*Authorizing the Construction and Operation of*  
**Sid Richardson Carbon Borger Plant**  
*Located at* **Borger, Hutchinson County, Texas**  
*Latitude* 35° 39' 56" *Longitude* -101° 26' 11"

Permit: 1867A and PSDTX1032M1

Amendment Date: February 8, 2019

Expiration Date: August 27, 2025

  
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For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]<sup>1</sup>
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and



operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources-- Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] <sup>1</sup>
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. <sup>1</sup>

<sup>1</sup> Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

## Special Conditions

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1. This permit authorizes carbon black manufacturing (furnace black), pelletizing, handling, storage, packaging, and shipping facilities and ancillary support facilities, including feedstock handling and storage facilities. **(7/11)**
  - A. This permit authorizes those sources of emissions located at this site that, along with their emissions point numbers (EPNs), are listed in the attached table entitled “Emission Sources - Maximum Allowable Emission Rates” (MAERT). The nature and rates of air contaminants authorized from each source/facility are limited to those listed in the MAERT for the named source/facility and its respective EPN.
  - B. The sources listed in Table 1 are not authorized by this permit:

Table 1. Construction Authorizations for Sources at This Site Not Authorized by This Permit.			
Facility Description	Emission Point Number (EPN)	Registration Number/Date	Rule Citation (Title 30 Texas Administrative Code) [30 TAC]
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% VOC	Sitewide	De minimis	§116.119(a)(1)
Aerosol can puncturing equipment	Sitewide	De minimis	§116.119(a)(1)
Aerosol solvent and lubricants usage less than 64 oz. per day	Sitewide	De minimis	§116.119(a)(1)
Totally Enclosed dry abrasive blast cleaning cabinets	Sitewide	De minimis	§116.119(a)(1)
Application of coatings less than 100 gal per year	Sitewide	De minimis	§116.119(a)(1) and (2)
Comfort air conditioning and ventilation systems	Sitewide	De minimis	§116.119(a)(1)
Welding/Cutting/Brazing	Sitewide	NA	§106.227
Sanding and grinding using hand held and manually operated machinery	Sitewide	NA	§106.265
Remote reservoir parts washers	Sitewide	NA	§106.454
Carbon Black Oil Tanks	CBO-1 through	NA	§106.472

Table 1. Construction Authorizations for Sources at This Site Not Authorized by This Permit.			
Facility Description	Emission Point Number (EPN)	Registration Number/Date	Rule Citation (Title 30 Texas Administrative Code) [30 TAC]
	CBO-4		
Organic and Inorganic liquid loading and unloading	Sitewide	NA	§106.472

### Operational Limitations

2. Opacity of emissions from all emission points identified as an EPN on the attached MAERT must not exceed 15 percent averaged over a six-minute period. **(4/10)**
  - A. A visible emissions observation may be conducted *in lieu* of an opacity observation. If visible emissions are observed, opacity shall be determined for that emission point by Title 40, Code of Federal Regulations, Part 60 (40 CFR Part 60), Appendix A, Reference Method 9. **(7/11)**
  - B. Visible emissions shall be recorded for the Boiler Stack (EPN 119), Plant 1 Dryer Stack (EPN 121), and Plant 2 Dryer Stack (EPN 122) at least every other weekday except plant holidays. For example, visibility will be recorded on Monday, Wednesday, and Friday of the first week and on Tuesday and Thursday of the second week. Visible emissions shall be recorded for flares according to Special Condition No. 22.F. Visible emissions shall be recorded for all other emission points which have particulate matter emission limits in the attached MAERT, except for fugitive emissions, once per quarter. **(1/12)**
  - C. The source shall be operating when the visible emissions observation is made. **(7/11)**
    - (1) Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point(s).
    - (2) Up to three emissions points may be read concurrently, provided that all three emissions points are within a 70 degree viewing sector or angle in front of the observer.

- (3) The proper sun position (i.e., at the observer's back) shall be maintained for all emission points, even when viewing multiple emission points.
  - (4) Contributions from uncombined water shall not be included in determining compliance with this condition.
  - (5) Visible emissions observations shall be documented and recorded when they are conducted and each observation must be recorded as either visible emissions observed or no visible emissions observed.
  - (6) Visibility observations shall be for at least 5 minutes duration for the flares and at least 15 seconds for other emission points.
- D. Visible emissions of any level from the Boiler Stack shall be considered indicative of poor operation of the plant. Any visible emissions episodes from the Boiler Stack shall be recorded by the plant operators and the problem leading to the visible emissions shall be addressed within five working days. **(4/10)**
3. Actual emissions of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) shall be based on the following emission factors and an assumed waste heat boiler destruction efficiency for CO of 99 percent and 99.8 percent for VOC. **(3/04)**
- A. 1.37 lb-CO/lb-black
  - B. 0.0552 lb-VOC/lb-black
  - C. 12.8 lb-NO<sub>x</sub>/ton-black
  - D. Emission factors may be adjusted as necessary following initial demonstration of compliance as outlined in Special Condition No. 13.
4. Actual emissions of sulfur dioxide (SO<sub>2</sub>) shall be calculated by a mass balance approach which assumes that all sulfur in the feedstock, which is not accounted for by sulfur in the carbon black product, is converted to SO<sub>2</sub> in the waste gas combustion devices.
- A. The SO<sub>2</sub> emissions shall be calculated according to the following formula:

$$\text{SO}_2 = (\text{SI}-\text{SRB}) \times 64/32$$

where SI is sulfur input from feedstock oil; SRB is sulfur retained in the carbon black; and 64/32 is the molecular weight ratio of SO<sub>2</sub> to sulfur. The SI and SRB shall be determined by sampling as required in Special Condition No. 16.

- B. The carbon black oil feedstock rate for each unit shall not exceed the rates listed in the confidential submittal dated November 1, 2005. **(8/10)**
5. The firebox temperature of each of the two waste heat boilers, which share a common Boiler Stack (EPN 119) shall be a minimum of 1200°F while combusting tail-gas and shall be monitored continuously. **(8/10)**
- A. The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each firebox temperature transmitter shall be calibrated at a frequency in accordance with the manufacturer's specifications, or other written procedures that provide an adequate assurance that the transmitter is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:
    - ± 0.75% of the temperature being measured expressed in degrees Celsius; or
    - ± 2.5 degrees Celsius. **(1/09)**
  - B. The facility will manually record the temperature data to demonstrate that each waste heat boiler is operated at the proper conditions if/when the automated recording system fails. **(1/09)**
6. There shall be a daily visual inspection for fugitive leaks of particulate and off-gas from the baghouses and product transfer system. All visibly leaking components shall be recorded in an inspection log book. Every reasonable effort shall be made to repair leaking components within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair. The Executive Director of the Texas Commission on Environmental Quality (TCEQ), at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of leaks awaiting shutdown.

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7. Fuel for the Waste Heat Boilers No. 1 and 2 (EPN 119), the Plant 1 Dryer (EPN 121), the Plant 2 Dryer (EPN 122), and the flares (EPNs Flare-1, Flare-2, Flare-3, and Flare-4)] shall be limited to tail-gas from the carbon black reactors and/or pipeline-quality, sweet natural gas containing no more than 5 grains total sulfur per 100 dry standard cubic feet (dscf) on an annual basis. **(8/10)**
8. When the Waste Heat Boiler No. 1 or No. 2 is required to operate to produce steam and the bag filters for the reactors feeding any such boiler are inoperative, then only natural gas shall be used as fuel for the boiler(s) so affected. **(3/04)**
9. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TCEQ or any air pollution control agency with jurisdiction.
10. All fixed-roof carbon black oil storage tanks shall be equipped for bottom fill or equipped with submerged fill lines. **(3/04)**
11. Baghouses shall be equipped with bag filters that have particulate control efficiency of 99.9 percent or greater. **(3/04)**
12. Routing tail-gas to a flare is authorized by this permit only during planned maintenance, startup, or shutdown (MSS) performed according to Special Condition Nos. 20, 21, and 22. **(7/11)**

## Demonstration Of Compliance

13. The holder of this permit shall perform sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted to the atmosphere by the waste heat boiler and the dryers. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. **(3/04)**
  - A. The TCEQ Amarillo Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
    - (1) Date for pretest meeting.
    - (2) Date sampling will occur.
    - (3) Name of firm conducting sampling.
    - (4) Type of sampling equipment to be used.

- (5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or the U.S. Environmental Protection Agency sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Amarillo Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Office of Air, Air Permits Division.

- B. Air contaminants to be tested for include (but are not limited to) NO<sub>x</sub>, CO, particulate matter (PM), and VOC.
- C. Sampling shall occur within 60 days after the modifications are complete and at such other times as may be required by the Executive Director or the Amarillo Regional Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Amarillo Regional Office. **(8/10)**
- D. Testing shall be performed when the feedstock input rate for each unit is at the maximum usable rate for achieving the quality specifications of the carbon black being produced at the time.
- E. The production rate of individual grades of carbon black shall be recorded during the test. This information, together with the sampling results, shall be used to demonstrate that the hourly emission rates for NO<sub>x</sub>, CO, and VOC have not been exceeded. This analysis shall appear in the sampling report.
- F. A copy of the final sampling report shall be forwarded to the TCEQ Amarillo Regional Office within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. **(8/10)**
14. After completion of the compliance test required by Special Condition No. 13, the permit holder shall submit a request for permit modification to the TCEQ. This alteration will adjust the maximum allowable emission rates of PM and NO<sub>x</sub> to levels statistically consistent with those measured during the compliance test. This alteration request must be submitted within 180 days after the completion of the test. **(3/04)**

15. The total sulfur content of the carbon black feedstock is limited to 3.0 percent on an annual basis. The short-term sulfur content of the feedstock is limited such that the hourly maximum SO<sub>2</sub> rate does not exceed 3921.61 pounds per hour (lbs/hr) (equivalent to 3.2 percent feedstock sulfur content). The average sulfur content of the feedstock oil will be calculated daily using a 60-day rolling average and will not exceed 3.0 percent.
16. The following plan will be utilized to monitor the sulfur content of the oil feedstock used in the production process: **(3/04)**
  - A. Feedstock oil shall be stored in the oil storage tanks listed on the attached Maximum Allowable Emissions Rate Table before being introduced into Plant 1 or Plant 2. **(8/10)**
  - B. The feedstock oil to Plant 1 and Plant 2 will be sampled, tested, and recorded daily for sulfur content at the inlet to the reactors (one sample for Plant 1 and one sample for Plant 2) except on weekends and holidays when no lab personnel are present. When personnel are not present to test the samples, the samples will be tested on the next day personnel are available. The daily test result from the reactors will be utilized to determine compliance with the short-term limit. A 60-day rolling average will be calculated daily.
  - C. The sulfur content of the oil storage tanks will be measured and recorded weekly.
  - D. The sulfur content of the carbon black produced will be determined weekly for each carbon black grade.
  - E. The maximum hourly SO<sub>2</sub> emission rates will be calculated daily.
  - F. Feedstock (carbon black oil) sampling (EPN: CBO SAMPLE) for sulfur content shall not emit more than 0.001 pounds of VOC per sampling event. **(7/11)**
  - G. In-situ manual sampling of carbon black (EPN: BLACK SAMPLE) for sulfur content and quality assurance/quality control shall not emit more than 0.1598 pounds of PM per ton of material sampled and 0.0756 pounds of PM equal to or less than 10 microns in diameter (PM<sub>10</sub>) per ton of material sampled. **(7/11)**

### **Sampling And Recordkeeping Requirements**

17. The holder of this permit shall make and maintain records shown below. These records shall be maintained on a five-year retention basis, updated at least monthly, and made immediately available upon request to personnel of the TCEQ or any air pollution control program having jurisdiction. **(7/11)**



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- A. The production of each grade of carbon black from the plant in lbs/hr and tons per year (tpy). This information will be treated as confidential by the TCEQ.
- B. The SI rates in lbs/hr to tread and carcass production units during production of the carbon blacks recorded in accordance with Special Condition No. 17A. The SI rates shall be determined by using weight percent sulfur in the oil as determined by Special Condition No. 16.
- C. The percent sulfur contained in the carbon black feedstock oil on a daily basis and the annual average. **(3/04)**
- D. The sulfur retained in the tread and carcass carbon blacks that are recorded in accordance with Special Condition No. 17A.
- E. The maximum hourly SO<sub>2</sub> emission rate for each sulfur sample period as described in Special Condition No. 16. The SO<sub>2</sub> emission rates for tread and carcass production shall be determined by the procedure defined in Special Condition No. 4.
- F. A rolling consecutive 12-month total of the emissions of SO<sub>2</sub>, CO, NO<sub>x</sub>, and VOC emissions from EPNs 119, 121, 122, Flare-1, Flare-2, Flare-3, and Flare-4 in TPY. The CO, NO<sub>x</sub>, and VOC emissions for EPNs 119, 121, and 122 shall be determined using the emission factors shown in Special Condition No. 3 and the carbon black production recorded in accordance with Special Condition No. 17A. **(1/06)**
- G. Inspection records and records of corrective actions taken as a result of the maintenance program described in Special Condition No. 6.
- H. A record of the opacity of each stack observed by the certified opacity observer according to the schedule specified in Special Condition No. 2 and records of all opacity episodes and actions taken to correct the problems leading to the opacity.
- I. Upset and maintenance records showing the cause of the problem, downtime, and action taken to correct the problem as required by 30 TAC §§ 101.201 and 101.211. **(3/04)**
- J. Records of all sampling results and calculations required by Special Condition Nos. 4 and 16. **(3/04)**
- K. Records of the hours of operation of the flares. **(1/06)**
- L. Records of planned MSS activity required in Special Condition No. 29. **(7/11)**

- M. Records of all work practices developed, and planned maintenance, startup, and shutdown activities conducted in accordance of Special Condition No. 30. **(7/11)**
18. The holder of this permit shall make and maintain records of the following. These records shall be maintained permanently or on the retention basis indicated and shall be made immediately available upon request to personnel of the TCEQ or any air pollution control program having jurisdiction.
- A. The May 2009 permit application and subsequent alteration and amendment applications for a period of 10 years. **(8/10)**
  - B. Emission testing performed according to Special Condition No. 13 until superceded by subsequent sampling and testing. **(8/10)**
  - C. The latest version of the written flare pilot flame operating procedure required by Special Condition No. 22E. **(8/10)**
  - D. The confidential submittal dated November 1, 2005. **(8/10)**
  - E. The September 14, 2009 supplement to the amendment application which contains the manufacturer recommended steam turbine maintenance plan until superceded. **(8/10)**
  - F. Inspection records and records of corrective actions taken as a result of the maintenance program described in Special Condition Nos. 20 and 21 for a period of 10 years. **(8/10)**
  - G. The permit holder shall retain the calculation methods used to estimate the emissions for each of the activities listed in Special Condition No. 27 for the life of the permit or until superceded. **(7/11)**

### **Reporting and Notification**

19. The holder of this permit shall make the following reports or notifications to the TCEQ Amarillo Regional Office: **(8/10)**
- A. Notification by telephone, electronic mail, or in writing at least 24 hours before beginning any planned MSS on a boiler, the steam turbine, a tail-gas fan, or ductwork between a reactor and the boilers. **(8/10)**
  - B. Notification according to 30 TAC §101.211(a) if unauthorized emissions are expected to result from any scheduled MSS activity. **(8/10)**

- C. Inspection records and records of corrective actions taken as a result of the maintenance program described in Special Condition No. 20 shall be reported annually. **(8/10)**
- D. Records of the hours of operation of the flares shall be reported annually. **(8/10)**

### **Maintenance, Startup, Or Shutdown**

- 20. Maintenance of the boilers, the steam turbine, and associated duct work shall be performed according to Sections A and B of this Special Condition. Venting of tail-gas to a flare is authorized only for this planned MSS. Flare use shall be limited to 840 hours annually at each flare. Flares are authorized to be used only during the following events, which must be scheduled at least 24 hours in advance: **(7/11)**
  - A. Maintenance, including inspections, shall be limited to the maintenance activities listed in Sections A(1) and A(2) of this Special Condition plus up to 13 days for contingency to order parts or perform repair that was not anticipated (and which may include up to three days for cool-down and three days for warm-up of the equipment). Shut down of a boiler resulting from maintenance under this Special Condition shall not exceed 840 hours annually at each boiler. **(7/11)**
    - (1) Steam turbine maintenance conducted according to the schedule recommended by manufacturer(s), as included in the September 14, 2009 supplement to the amendment application. **(8/10)**
    - (2) Boiler inspection or repair of leaking boiler tubes. **(8/10)**
  - B. Tail-gas fan and/or associated duct work maintenance, including balancing and repair of a fan. This activity shall not exceed 168 hours annually at each fan and/or its associated ductwork. If this activity results in the shutdown of a boiler then the time shall count as part of 840 hour annual maintenance allowance under Section A of this Special Condition. **(7/11)**
- 21. An MSS event which requires the use of a flare and which cannot be scheduled at least 24 hours in advance shall not be counted as maintenance for Special Condition No. 20. Outage which is due to software malfunctions or operational error shall not be counted as maintenance for Special Condition No. 20. Outage due to errors by plant contractors or repair crews shall be considered operational errors. **(8/10)**

22. Routing tail-gas to a flare is authorized by this permit only during planned MSS performed according to this Special Condition and Special Condition Nos. 20 and 21. Each flare shall be designed and operated in accordance with the following requirements: **(8/10)**
- A. The combined assist natural gas and waste stream to the flare shall meet the Title 40 Code of Federal Regulations § 60.18 (40 CFR § 60.18) specifications of minimum hydrogen content and maximum tip velocity under normal, upset, and maintenance flow conditions. The hydrogen content and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the TCEQ Regional Office to demonstrate compliance with this condition. The EPA Method 9 may be used in lieu of EPA Method 22 for flare testing required by 40 CFR § 60.18(f) or 40 CFR § 63.11. **(1/12)**
  - B. The flare shall be operated with a flame present at all times that tail-gas is being routed to the flare and shall have a constant pilot flame before tail-gas is introduced into the flare and at all other times when the flare is in operation. The pilot flame shall be monitored by a thermocouple or other pilot flame monitoring. **(7/11)**
  - C. Opacity attributable to sulfur oxides formation associated with the combustion of reduced sulfur compounds shall not exceed 10 percent. The flare shall be operated with other no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.
  - D. Each flare pilot flame monitoring device required by Special Condition No. 22.B or applicable sections of 40 CFR Part 63 (40 CFR § 63.1103, 40 CFR § 63.987, and 40 CFR § 63.11) shall be accurate to within manufacturer's recommendations and verified at least annually in accordance with the manufacturer's specifications. The facility will manually record the flare pilot data to demonstrate that the flares(s) are being operated at the proper conditions if/when the automated recording systems fail. **(7/11)**
  - E. The holder of this permit shall prepare a written operating procedure that ensures that no tail-gas will be introduced into any flare before its pilot flame has been established and shall maintain this procedure within easy access of plant operators. **(8/10)**
  - F. For each period of operation for each flare, visible emissions observations and follow-up opacity observations shall be made and recorded every other weekday using the procedures of Special Condition No. 2. For each quarter year during the

operation for each flare authorized by Special Condition No. 20, the opacity shall be determined for that flare by 40 CFR § 60, Appendix A, Reference Method 9. Any visible emissions episodes shall be recorded by the plant operators and the problem leading to any visible emissions event which lasts more than five minutes during any two consecutive hours or exceeds 10 percent opacity shall be addressed within five working days. **(8/10)**

23. Planned MSS activities and related emissions are authorized for the sources and activities described in and limited by the Special Conditions and MAERT of this permit. No other MSS activities and emissions are authorized by this permit for the facilities listed on the Special Conditions and MAERT.
24. The Emergency Generator Engine (EPN C-1) testing and maintenance may not exceed 120 hours per year. Records shall be kept documenting any testing and maintenance performed. The engine EPN C-1 listed in the MAERT has emissions during normal operations that are not different than the emissions that occur during any planned MSS activities, and therefore, does not require any additional authorization. **(7/11)**
25. When carbon black feedstock oil storage tank turnover and tank cleaning occurs for the purposes of floor and wall corrosion inspections, the tanks shall be drained to the bottom discharge line. **(7/11)**
26. Natural Gas Orifice Changeout emissions shall be minimized by minimizing the volume of natural gas required to be purged to atmosphere per changeout. **(7/11)**
27. The following planned MSS activities are authorized. **(7/11)**
  - A. The authorized planned MSS activities that result in VOC emissions are as follows:
    - (1) Natural gas orifice change outs will result in 0.1678 lb natural gas emissions per event and is limited to 208 events per year. **(1/12)**
    - (2) Refilling carbon black feedstock oil storage the tank after inspection will result in <0.04 tpy of VOC emissions per tank inspection event. **(7/11)**
  - B. The authorized planned MSS activities that result in PM and PM<sub>10</sub> emissions are as follows: **(7/11)**

- (1) Recasting furnace refractory requires that powdered castable refractory compound be mixed with water in a container. The dust free admixture is then applied to the walls of the furnace and allowed to air dry.
  - (2) The removal and replacement of the filter media from control devices shall be performed in such a manner as to minimize to the extent practicable the re-entrainment of particulate matter captured by the filter media into the atmosphere.
28. A reactor shall not be vented to EPN RVS or EPN RVL when feedstock oil or any fuel other than pipeline quality sweet natural gas is present in the reactor. **(7/11)**
29. Planned MSS activities authorized by Special Condition Nos. 24 through 28 shall be documented.
  - A. Documentation shall include the following, as appropriate: **(7/11)**
    - (1) The process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
    - (2) The type of planned MSS activity and the reason for the planned activity;
    - (3) The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
    - (4) The date and time of the MSS activity and its duration;
    - (5) The start date and time and end date and time and the duration of emissions in hours whenever reactor emissions are routed to EPN RVS or EPN RVL.
    - (6) The estimated quantity of each air contaminant emitted, with the data and methods used to determine it.
  - B. All MSS emissions required to be recorded by this Special Condition shall be summed monthly and the rolling 12-month emissions required by the MAERT shall be updated on a monthly basis. **(7/11)**
30. Work practices will be developed, implemented, and documented that are designed to minimize air contaminant emissions during each of these authorized MSS activities by:

limiting the duration of exposure of contaminants to atmosphere while the activities are underway; and storing the spent materials, where possible, in closed containers until proper disposal. The developed work practices shall be modified by the permit holder as found appropriate and maintained current in written form. **(7/11)**

31. An evaluation of the emissions factors developed to estimate emissions for each of the activities listed in Special Condition Nos. 16F, 16G, and 27 will be conducted and documented by the permit holder within 18 months of the issuance of this amendment, and if necessary, updated by permit alteration or amendment, as appropriate. **(7/11)**
32. With the exception of the MAERT emission limits, these planned MSS permit conditions become effective 180 days after this permit amendment has been issued. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. **(7/11)**

Dated: January 17, 2012

# Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 1867A and PSDTX1032M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
1	Plant 1 No. 1 and No. 2 Dryer Purge Stack (7)	NO <sub>x</sub>	1.58	6.49
		CO	3.39	13.94
		VOC	0.56	2.30
		PM <sub>10</sub>	0.82	3.37
		SO <sub>2</sub>	78.43	322.06
		H <sub>2</sub> S	0.40	1.64
		CS <sub>2</sub>	0.40	1.64
		COS	0.13	0.55
2	Plant 1 Secondary Filter Stack	PM	1.18	4.86
3	Plant 1 No. 3 and No. 4 Dryer Purge Stack (7)	NO <sub>x</sub>	1.58	6.49
		CO	3.39	13.94
		VOC	0.56	2.30
		PM <sub>10</sub>	0.87	3.56
		SO <sub>2</sub>	78.43	322.06
		H <sub>2</sub> S	0.40	1.64
		CS <sub>2</sub>	0.40	1.64
		COS	0.13	0.55
103	Plant 1 Pulse Filter No. 1 Vent	PM	0.14	0.59
104	Plant 1 Pulse Filter No. 2 Vent	PM	0.14	0.59
106	Plant 1 Pulse Filter No. 3 Vent	PM	0.14	0.59
105	Plant 1 Pulse Filter No. 4 Vent	PM	0.14	0.59
107	Plant 1 Pulse Filter No. 5 Vent	PM	0.14	0.59



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
74	Plant 2 No. 1, No. 2 and No. 3 Dryer Purge Stack (7)	NO <sub>x</sub>	1.73	7.11
		CO	3.72	15.27
		VOC	0.56	2.30
		PM <sub>10</sub>	0.88	3.58
		SO <sub>2</sub>	78.43	322.06
		H <sub>2</sub> S	0.40	1.64
		CS <sub>2</sub>	0.40	1.64
		COS	0.13	0.55
76	Plant 2 Secondary Filter Stack	PM	1.37	5.61
78	Plant 2 No. 4, No. 5 and No. 6 Dryer Purge Stack (7)	NO <sub>x</sub>	1.73	7.11
		CO	3.72	15.27
		VOC	0.56	2.30
		PM <sub>10</sub>	0.98	4.02
		SO <sub>2</sub>	78.43	322.06
		H <sub>2</sub> S	0.40	1.64
		CS <sub>2</sub>	0.40	1.64
		COS	0.13	0.55
108	Plant 2 Pulse Filter No. 1 Vent	PM	0.14	0.59
109	Plant 2 Pulse Filter No. 2 Vent	PM	0.14	0.59
110	Plant 2 Pulse Filter No. 3 Vent	PM	0.14	0.59
111	Plant 2 Pulse Filter No. 4 Vent	PM	0.14	0.59
112	Plant 2 Pulse Filter No. 5 Vent	PM	0.14	0.59

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
119	Boiler Stacks Boiler 1 and 2 Common Stack (4)	NO <sub>x</sub>	222.44	-
		CO	477.57	-
		VOC	21.03	-
		PM	59.03	-
		PM <sub>10</sub>	41.79	-
		PM <sub>2.5</sub>	41.79	-
121	Plant 1 Dryer Stack (7)	NO <sub>x</sub>	46.60	-
		CO	322.03	-
		VOC	4.64	-
		PM	38.64	-
		PM <sub>10</sub>	26.86	-
		PM <sub>2.5</sub>	26.86	-
122	Plant 2 Dryer Stack (7)	NO <sub>x</sub>	84.84	-
		CO	322.03	-
		VOC	8.44	-
		PM	44.80	-
		PM <sub>10</sub>	31.14	-
		PM <sub>2.5</sub>	31.14	-
119, 121, 122 Flare-1, Flare-2, Flare-3, and Flare-4	Cap for Boiler Stacks, Flares, and Dryer Stacks (4,6)	NO <sub>x</sub>	-	1226.30
		CO	-	2632.76
		VOC	-	132.35
		PM	-	624.00
		PM <sub>10</sub>	-	437.09
		PM <sub>2.5</sub>	-	437.09

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
119, 121, 122 Flare-1, Flare-2, Flare-3, and Flare-4	Cap for Boiler Stacks, Flares, and Dryer for Combined Sulfur (4,5,7)	SO <sub>2</sub>	3607.88	14,814.84
		H <sub>2</sub> S	18.42	75.62
		CS <sub>2</sub>	18.42	75.62
		COS	6.14	25.21
C-1	Emergency Generator Engine 1	NO <sub>x</sub>	5.57	2.44
		CO	3.87	1.70
		VOC	0.07	0.03
15	No. 4 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40
		CO	0.08	0.40
		VOC	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
		SO <sub>2</sub>	0.01	0.01
19	No. 5 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40
		CO	0.08	0.40
		VOC	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
21	No. 1 Oil Preheater Stack	NO <sub>x</sub>	0.09	0.40
		CO	0.08	0.40
		VOC	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
		SO <sub>2</sub>	0.01	0.01
31	Carbon Black Oil Tank 1	VOC	0.01	0.02
32	Carbon Black Oil Tank 2	VOC	0.01	0.02
33	Carbon Black Oil Tank 3	VOC	0.01	0.02
34	Carbon Black Oil Tank 4	VOC	0.01	0.02
CBO SAMPLE	Feedstock (carbon black oil) Sampling	VOC	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
BLACK SAMPLE	In-situ Carbon Black Sampling	PM	0.02	0.02
		PM <sub>10</sub>	0.01	0.01
Maintenance, Startup, and Shutdown (MSS) Emissions				
Flare-1	Plant 1 Unit 1 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	11.55	-
		CO	156.98	-
		VOC	12.11	-
		PM <sub>10</sub>	15.47	-
Flare-2	Plant 1 Unit 2 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	13.86	-
		CO	188.38	-
		VOC	14.53	-
		PM	18.56	-
Flare-3	Plant 2 Unit 3 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	15.71	-
		CO	213.49	-
		VOC	16.47	-
		PM	21.04	-
Flare-4	Plant 2 Unit 4 Primary Bag Filter Flare (4,6)	NO <sub>x</sub>	13.86	-
		CO	188.38	-
		VOC	14.53	-
		PM	18.56	-
		PM <sub>10</sub>	18.56	-
		PM <sub>2.5</sub>	18.56	-
RVS	Cap for the 12 Small Reactor Vents	NO <sub>x</sub>	4.20	3.29
		CO	3.53	2.77
		VOC	0.23	0.20
		PM <sub>10</sub>	0.32	0.25
		PM <sub>2.5</sub>	0.32	0.25
		SO <sub>2</sub>	0.03	0.02

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (8)
RVL	Cap for the 3 Large Reactor Vents	NO <sub>x</sub>	2.50	4.04
		CO	2.10	3.40
		VOC	0.14	0.23
		PM <sub>10</sub>	0.19	0.31
		PM <sub>2.5</sub>	0.19	0.31
		SO <sub>2</sub>	0.02	0.03
119	Boiler Stacks Boiler 1 and 2 Common Stack MSS (4)	NO <sub>x</sub>	6.50	0.67
		CO	5.46	0.56
		VOC	0.36	0.04
		PM <sub>10</sub>	0.50	0.05
		PM <sub>2.5</sub>	0.50	0.05
		SO <sub>2</sub>	0.04	0.01
121 and 122	Cap for Plants 1 and 2 Dryer Stacks MSS (7)	NO <sub>x</sub>	3.50	1.02
		CO	3.00	0.86
		VOC	0.20	0.06
		PM <sub>10</sub>	0.30	0.08
		PM <sub>2.5</sub>	0.30	0.08
		SO <sub>2</sub>	0.10	0.01
MSS Fugitive Emissions				
CanMSS	Solvent and Aerosol Can Usage	VOC	6.40	1.40
ORIFICE	Orifice Changeout	VOC	0.01	0.02
REFRACTORY	Recasting Furnace Refractory	PM	0.03	0.01
		PM <sub>10</sub>	0.02	0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented

Emission Sources - Maximum Allowable Emission Rates

PM <sub>10</sub>	- total particulate matter equal to or less than 10 microns in diameter, including PM <sub>2.5</sub> , as represented
PM <sub>2.5</sub>	- particulate matter equal to or less than 2.5 microns in diameter
SO <sub>2</sub>	- sulfur dioxide
H <sub>2</sub> S	- hydrogen sulfide
CS <sub>2</sub>	- carbon disulfide
COS	- carbonyl sulfide

- (4) Annual emissions from the boiler and dryer stacks and each flare must also comply with the annual cap of emissions for these sources. Annual emission caps were based upon a maximum production rate of carbon black not to exceed 391.7 million pounds per year.
- (5) These emissions are the reduced sulfur compounds associated with combustion of the tail-gas. The combined reduced sulfur compounds from EPNs 119, 121, 122, Flare-1, Flare-2, Flare-3, and Flare-4 shall not exceed these rates. As previously authorized, the Dryers (EPNs 121 and 122) may burn up to 40 percent of the tail gas that flows to EPN 119 in addition to the natural gas-based emissions. The routed tail-gas may be burned in either Plant 1 or Plant 2 or both. **(1/06)**
- (6) The flares are authorized only as backup control devices to the boilers during planned shutdown, maintenance, and startup of the steam turbine, boilers and tail-gas fans as authorized by the special conditions. Emission rates are based on and the facilities are limited by 840 hours per year at each flare. **(8/10)**
- (7) Emission values for Dryer Purge Stacks (EPNs 1, 3, 74, and 78) have been altered to reflect increases in emissions that correspond with decreases in emissions in EPNs 121, 122, and 119/121/122 Flares due to rerouting of hot exhaust gases. **(1/08)**
- (8) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

Date: February 8, 2019